

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An ink-jet recording medium comprising:
a support; and
an ink receiving layer disposed on the support, the ink receiving layer containing at least fine polymer particles and having a porous structure,
wherein secondary particles of the fine polymer particles constitute the porous structure of the ink receiving layer,

wherein the fine polymer particles are selected from the group consisting of homo- or co-polymers of vinyl monomers, ester polymers, urethane polymers, amide polymers, epoxy polymers, and modified products and copolymers of these polymers, and the content of the fine polymer particles is 50% by mass or more of solid contents in the ink receiving layer, and

wherein the ink receiving layer has a pore volume per unit thickness (A/B) of 2.0×10^{-5} ml/cm²/μm or more,

wherein A is a pore volume ($\times 10^{-5}$ ml/cm²) in the ink receiving layer at a pore diameter equal to an average particle diameter of the fine polymer particles, the pore volume being determined based on a pore distribution curve obtained according to a nitrogen gas adsorption technique; and

B is a dry thickness (μm) of the ink receiving layer.

2. (original): An ink-jet recording medium according to claim 1, wherein the pore volume A in the ink receiving layer at the pore diameter equal to the average particle diameter of the fine polymer particles is 50×10^{-5} ml/cm² or more.

3. (canceled).

4. (original): An ink-jet recording medium according to claim 1, wherein a ratio of Y to X [(Y/X)×100] is 65% or more,

wherein Y is a pore diameter (nm) at a maximum peak of the pore volumes in the ink receiving layer, the pore diameter being determined based on a pore distribution curve obtained according to a nitrogen gas adsorption technique; and

X is an average particle diameter (nm) of the fine polymer particles.

5. (original): An ink-jet recording medium according to claim 1, wherein the pore diameter Y is 33 nm or more, where Y is the pore diameter corresponding to a maximum peak of a pore volumes of secondary particles of the fine polymer particles in the ink receiving layer, the pore diameter being determined based on a pore distribution curve obtained according to a nitrogen gas adsorption technique.

6. (canceled).

7. (original): An ink-jet recording medium according to claim 1, wherein the fine polymer particles have an average particle diameter of 10 to 100 nm.

8. (original): An ink-jet recording medium according to claim 1, wherein the ink receiving layer further contains a water-soluble resin.

9. (original): An ink-jet recording medium according to claim 8, wherein the water-soluble resin is at least one of poly(vinyl alcohol) resins, cellulosic resins, resins having an ether bond, resins having a carbamoyl group, resins having a carboxyl group, and gelatin substances.

10. (original): An ink-jet recording medium according to claim 9, wherein the poly(vinyl alcohol) resins are partially saponified poly(vinyl alcohol)s.

11. (original): An ink-jet recording medium according to claim 10, wherein the partially saponified poly(vinyl alcohol)s have a degree of saponification of 65% to 90%.

12. (original): An ink-jet recording medium according to claim 8, wherein a mass ratio of the fine polymer particles to the water-soluble resin in the ink receiving layer is from 4:1 to 20:1.

13. (original): An ink-jet recording medium according to claim 8, wherein a content of the water-soluble resin is 4% to 25% by mass of total solids in the ink receiving layer.

14. (original): An ink-jet recording medium according to claim 1, wherein the ink receiving layer further contains a crosslinking agent.

15. (original): An ink-jet recording medium according to claim 1, wherein the ink receiving layer further contains a mordant.

16. (original): An ink-jet recording medium according to claim 1, wherein the ink receiving layer has a dry thickness of 10 to 100 μm .

17. (currently amended): An image forming method comprising the step of:
applying an ink to an ink receiving layer of an ink-jet recording medium so as to form an image,

wherein the ink-jet recording medium comprises:

a support; and

the ink receiving layer disposed on the support, the ink receiving layer containing at least fine polymer particles and having a porous structure,

wherein secondary particles of the fine polymer particles constitute the porous structure of the ink receiving layer,

wherein the fine polymer particles are selected from the group consisting of homo- or co-polymers of vinyl monomers, ester polymers, urethane polymers, amide polymers, epoxy

polymers, and modified products and copolymers of these polymers, and the content of the fine polymer particles is 50% by mass or more of solid contents in the ink receiving layer, and

wherein the ink receiving layer has a pore volume per unit thickness (A/B) of 2.0×10^{-5} ml/cm²/μm or more,

wherein A is a pore volume ($\times 10^{-5}$ ml/cm²) of the ink receiving layer at a pore diameter equal to the average particle diameter of the fine polymer particles, the pore volume being determined based on a pore distribution curve obtained according to a nitrogen gas adsorption technique; and

B is a dry thickness (μm) of the ink receiving layer.

18. (original): An image forming method according to claim 17, wherein a ratio of Y to X [(Y/X)×100] in the ink-jet recording medium is 65% or more,

wherein Y is a pore diameter (nm) at a maximum peak of the pore volumes in the ink receiving layer, the pore diameter being determined based on a pore distribution curve obtained according to a nitrogen gas adsorption technique; and

X is an average particle diameter (nm) of the fine polymer particles.

19. (original): An image forming method according to claim 17, wherein the pore diameter Y in the ink-jet recording medium is 33 nm or more, where Y is the pore diameter corresponding to a maximum peak of a pore volume of secondary particles of the fine polymer particles in the ink receiving layer, the pore diameter being determined based on a pore distribution curve obtained according to a nitrogen gas adsorption technique.

20. (currently amended): An ink-jet recording medium according to claim 1, wherein the fine ~~powder~~ polymer particles are homo- or co-polymers of vinyl monomers or urethane polymers.

21. (previously presented): An ink-jet recording medium according to claim 1, wherein the ink-jet receiving layer further contains a boron compound.

22 (new): An ink-jet recording medium according to claim 14, wherein the ink-receiving layer further comprises a water-soluble resin, and the water-soluble resin is crosslinked using the crosslinking agent.